Pest Update (June 27, 2012)

Vol. 10, no. 17

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Note: samples containing living tissue may only be accepted from South Dakota. Please do not send samples of dying plants or insects from other states. If you live outside of South Dakota and have a question, instead please send a digital picture of the pest or problem. **Walnut samples may not be sent in from any location – please provide a picture!**

Available on the net at:
http://sdda.sd.gov/Forestry/Educational-Information/PestAlert-Archives.aspx

In this issue **pg**

Plant development

We are still ahead of plant development this year due to the mild winter and early spring however it seems like we are accelerating plant development! This week the hydrangeas are in bloom in Brookings, a couple of weeks ahead of schedule.

Current concerns

I have received numerous emails and pictures as well as conducted many site visits regarding the appearance of blue spruce. The main complaint is the color of the needles on the lower branches. The needles are often speckled with yellow dots or even turning a reddish-yellow. One of the most common culprits is **spruce spider mite**, and if you look close you can often find the fine webbing created by these mites and the twigs will look "dirty" from all the debris caught in this webbing. However, while the feeding injury shows up in the summer, during the hot summer the activity of these mites drops significant (just like us) so not much additional injury occurs during the summer. The best management during the summer is to keep the tree well-watered to reduce further stress and spray high-pressure streams of water through the lower canopy to dislodge the mites and remove debris. The next treatment opportunity for pesticides is really not till autumn, about the time maple leaves begin to color, and horticultural oils are the best means to kill the mite without killing everything that eats the mites. However, the use of oils can remove some of the bluish coloration to the new growth on a spruce.

Lots of questions on curled ash leaves are still coming in. The ash leaf curl aphid, also known as the woolly ash aphid (*Prociphilus fraxinifolii*) is showing up across the state again this year as it frequently does each summer. The symptoms are curled leaves forming rosettes at the ends of ash shoots; particularly the rapid growing terminal shoots. If you unfolded the leaves you'll find these little "fuzzballs" that are aphids. You might also find lady beetle larvae that are feeding on the insects. Control is usually either letting it be – since any treatment will not uncurl the leaves and the lady beetles do a pretty

good job of control – or acephate (Orthene Systemic Insect Control) since this is a systemic and will kill the aphids as they feed. Imidacloprid can be used as a soil drench but this should have been applied back in May or early June to have any effect on this year's population. Most other insecticides are contact poisons and will not reach the aphids living inside the curls. We are really getting a little too late for effective control of the insect in 2012, might be better to note the problem occurred and begin treatments next June as the problem is first noticed.

Treatment to begin

Photo credit: Missouri Botanical Gardens.

Apple maggot (*Rhagoletis pomonella*) is one of the insects that can infest apples in our state and one of the most serious apple problems East River. Symptoms of a maggot infestation are dimpled, lumpy appearance to the surface of the apple and the flesh often turning mushy and containing the brown trails of the larvae – hence the other common name "railroad worm." A sure sign of the pest – an unpleasant one if you happen to find one, or *half* of one, while eating the apple – is a small (1/4"), creamy white and legless larva in the fruit. The adults, resembling houseflies with banded wings, should be flying and laying eggs on the developing apples in another week and will continue with egg-laying for another month. Once the eggs hatch the larvae burrow into the apple. The apple maggot pupates in the soil and emerges as an adult beginning in early July. However emergence and egg laying do not really begin until the middle of July so there is still time plenty of time for control measures (even if any eggs are laid earlier in the season the egg is either crushed by the expanding fruit or the larvae cannot survive in the high-acid of the newly developing apple). Control is either carbaryl (Sevin) or Malathion applied in another week or two with subsequent applications every 7 to 10 days for three or four applications. Apple maggots tend to emerge from the soil after a 1/2-inch rains so some growers time applications with rainfall but this is not necessary for the home-production.

Another means of management is to place 3-inch diameter bright red balls in the tree, about 2 in semi dwarf trees (about 10-15 feet tall) and 5 in standard size trees (about 20-30 feet tall) that are covered with a sticky material called tanglefoot. The female apple maggot always flies to the biggest, brightest apple to lay her eggs and these will be the biggest, brightest "apples" in the tree. You cannot eliminate the pest by using this control but the population can be significantly reduced. The "apples" can be made from material found in almost any garden store – even can find tanglefoot at most hardware stores or you can buy the completed "apples" from the Internet, try www.GardensAlive.com.

Still another possible control measure is to spray Kaolin clay on the fruit. The clay is not a true pesticide but it irritates the adult apple maggot and they tend to fly to other fruit. The clay must be reapplied if we have some heavy rains so expect to make several applications during a season. The clay is sold as 'Surround at Home" and can also be obtained from www.GardensAlive.com.

E-samples

Lecanium scale samples are appearing now. I have had a number of people notice these hardened red to brown shells clustered along the branches of their maples, hackberries and elms. The leaves surrounding these infested branches are often sticky as well as the ground beneath the tree and this is from honeydew, a sweet substance excreted by soft scales as they feed. The eggs e hatching a few weeks ago, about the time lindens were in bloom, and the newly hatched young, called crawlers, are vulnerable to pesticide sprays since they are not covered with a hard shell yet. Unfortunately, that opportunity is behind us now. The other method of pesticide delivery is as a soil drench with a product containing imidacloprid. However this must be applied at least 30 days before control is needed so it should have been applied in May or earlier to ensure good distribution through the tree. Control is probably best delayed until next year.

Samples received

Brule-Buffalo County **What is wrong with this ash? The entire row is like this.**

The only insect found in the sample was the ash bark beetle. This is a secondary insect generally attacking trees that are already declining rather than being the cause of the decline. There must be other reasons for the decline and dieback in the ash but what it could be cannot be determined from the sample.

Charles Mix County FL120032 **What is causing the brown discoloration on my spruce?**

This is spruce spider mite. See the information under "Current Concern" for control.

Clay County FL1200031 **What is wrong with this hackberry?**

The injury on the tree is due to a heavy infestation of lecanium scale. See the information above for control.

Clay County FL1200036 **What is wrong with my pine and mountainash?**

The decline of the pine is most likely due to the fungal disease diplodia tip blight. I have received numerous reports of the disease symptoms appearing on ponderosa pines throughout the southeastern part of the state. The problem is really more of an age-issue than strictly a disease as the trees that are mostly expressing symptoms are in the 60 to 100 year range and have been declining for several years now. While the disease can be managed, though not eliminated, with timely applications of fungicides in the spring (see previous Updates for more information on timing and chemicals), on these over-mature trees in shelterbelts I am recommending removal and replanting.

I am also seeing a lot of fireblight appearing on apples, mountainash and pears this year. The symptoms are a discoloration and wilting of the foliage, often limited to a branch or two, though sometimes throughout the entire tree. The foliage soon dies and the tips of the affected tips also often curl and turn black as if scorched, hence name fireblight. The best means for combating this disease is to prune out infected branches when the symptoms first appear as this action can often prolong the life of the tree. However, since the disease is systemic it can often spread throughout much of the tree before symptoms are noted. If pruning is performed the pruners should be sprayed with Lysol Disinfectant between cuts to avoid transferring the disease to healthy tissue.

Haakon County FL1200037 **These are junipers that are about 8 to 10 years old and are starting to have their needles turn brown. We thought it might be mites.**

The problem is phomopsis twig blight, one of the most common diseases of junipers. The most common symptoms is the yellowing of the tips typically in May or June (discoloration that appears earlier in the season is often due to Kabatina, though examining fruiting structures is the only way to be certain which disease is present). The disease can be managed with fungicide applications beginning in May so we are too late for this year. See previous Updates from this spring for more information on timing and products.

Hanson County FL1200033 **Why are the tips of my spruce curling?**

This appears to be due to herbicide. At this time of year I generally receive lots of herbicide-related plant injury samples. I cannot say which herbicide was responsible for the injury – that requires a chemical analysis to be certain – but the symptoms on the plant – curling tips and distorted foliage – are consistent with

herbicide exposure and there were no signs of any pest that could be responsible for similar symptoms.

Lake County FL1200038 **What is wrong with my spruce? The lower branches are dying.**

The primary problem noted on the sample was cytospora canker, one of the most common diseases of Colorado blue spruce. The disease typically is first seen when the tree is about 15 feet tall or more, just the time they are at the size we want, and the first symptom is the decline and death of the lower branches. Infected branches can be identified by the bluish-white resin blisters, almost appearing as bird-droppings, along the branch. The best control is to prune out infected branches during dry weather.

Spink County FL120034 **What are these strange growths on the fruit?**

This is plum pockets, a fungal disease that results in spongy, hollow fruit on plums and chokecherries. It will not affect apples. The control of this disease involves fungicide sprays in the spring as the buds are just beginning to open but I have had little success with treatments. Removing the infected fruit might be the best option. Plum pockets is not common on chokecherry and there is a small insect called the chokecherry midge that can cause symptoms that are very similar.